

### **REMARKS**

Claims 1-21 and 23-25 were presented and examined. In response to the Office Action, Claims 1, 8, 15, and 20 are amended, no claims are added, and Claims 2, 9, 18 and 25 are cancelled. Claim 22 was cancelled previously. Applicant requests reconsideration of the application in view of the following remarks.

#### **Allowable Subject Matter**

Applicant acknowledges with appreciation the Examiner's indication that Claims 3-7, 19, and 25 would be allowable if rewritten. In response, Claim 20 is amended to incorporate cancelled Claim 25. Therefore please allow Claims 20-24.

#### **Objection to the Claims**

Claim 16 is objected to as being of improper dependent form. Claim 16 is cancelled.

#### **Claim Rejections under 35 U.S.C. §112**

Claims 8-14 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In response to the Examiner's rejection of Claims 8-14, Applicant directs the Examiner to at least Fig. 5 of Applicant's specification which illustrates a storage device 504 as well as a processor 502. As described by the corresponding portion of Applicant's specification, transceiver 500 includes a processor 502 having circuitry to execute instructions. These instructions may be stored within a computer readable storage medium such as storage device 504. In view of Applicant's Fig. 5 and the corresponding text of the specification, we submit that the computer readable storage medium referred to in Claim 8-14, is described in the specification in such a way should enable one skilled in the art to which it pertains or to which it is most nearly connected to make and or use the invention. Therefore, please reconsider and withdraw the 35 U.S.C. §112, first paragraph rejection of Claims 8 as well as dependent Claims 9-14.

**Claim Rejections under 35 U.S.C. §102**

Claims 1, 8, 15-16, and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,775,240 to Zhang, et al. (“Zhang”). Applicant respectfully traverses this rejection.

Claim 1 recites:

A method comprising:  
transmitting, by a transmitting station, a pulse signal over a transmission channel between the transmitting station and a communication receiving station;  
repeating the transmitting of the pulse signal over the transmission channel between the transmitting station and the communication receiving station until the transmitting station receives a delay/amplitude echo map of the transmission channel from the communication receiving station; and  
pre-distorting, by the transmitting station, signal transmissions over the transmission channel between the transmitting station and the communication receiving station to eliminate channel echoes in transmitted data signals by using an echo structure of the received delay/amplitude echo map of the transmission channel. (Emphasis added.)

As indicated above, Claim 1 is amended to incorporate the features of cancelled Claim 2, which as indicated by the Examiner, are not disclosed by Zhang. Claim 1, however, is further amended to recite that the repeating of the transmitting of the pulse signal over a transmission channel is performed until the transmitting station receives a delay/amplitude echo map of a transmission channel from a communication receiving station. According to the Examiner, this feature of Claim 1 is disclosed by Zhang with reference to col. 7, lines 10-22. This passage referred to by the Examiner, however, indicates that the functions of the test analyzer/controller 170 may be implemented in a separate component or may be distributed among test transmitter 110 and test receiver 120. It is improper for the Examiner to rely on Zhang to disclose that a transmitting station receives a delay/amplitude echo map of a transmission channel from a communication receiving station, as in Claim 1. It cannot be said that either the transmitter 110 or test receiver 120 would receive a delay/amplitude echo map; instead, the functionality of the

test analyzer/controller is only performed by transmitter 110 or receiver 120 if such functionality was distributed within the transmitter 110 or receiver 120.

For each of the above reasons, therefore, Claim 1 and all claims which depend from Claim 1 are patentable over Zhang as well as the references of record. Therefore, please reconsider and withdraw the §102(e) rejection of Claim 1. Independent Claims 8 and 15 are amended to incorporate features of corresponding cancelled Claims 9 and 18, which as indicated by the Examiner, are not disclosed by Zhang. Therefore, Claims 8 and 15 are also patentable over Zhang as well as the references of record for similar reasons. Therefore, Applicant respectfully requests the Examiner reconsider and withdraw the §102(e) rejection of Claims 1, 8, 15-16, and 20-21.

#### **Claim Rejections under 35 U.S.C. §102**

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang, as applied to Claim 1, in view of U.S. Patent 5,608,728 to Ulm, et al. ("Ulm"). We respectfully traverse this rejection.

As indicated above, Claim 1 is amended to incorporate the features of cancelled Claim 2 to recite:

...pre-distorting, by the transmitting station, signal transmissions over the transmission channel between the transmitting station and the communication receiving station to eliminate channel echoes in transmitted data signals by using an echo structure of the received delay/amplitude echo map of the transmission channel. (Emphasis added.)

According to the Examiner, this feature of cancelled Claim 2 is disclosed by Ulm. We respectfully disagree with the Examiner's assertions and characterizations regarding Ulm. According to the Examiner, pre-distortion of signal transmissions over transmission channel is disclosed at col. 2, lines 50-56 and col. 1, line 55 of Ulm. These passages referred to by the Examiner, however, refer to pre-distortion of transmitted signals to compensate for expected distortions in the reverse channel. Neither the passages referred to by the Examiner, nor any

other portion of Ulm discloses that the pre-distortion of signal transmissions for eliminating channel echos are performed using an echo structure of a received delay/amplitude echo map of the transmission channel.

Furthermore, for the reasons indicated above, we are unable to discern and the Examiner has failed to identify any portion of Zhang in view of Ulm that teaches the communication of a delay/amplitude echo map of a transmission channel to a transmitting station from a communication receiving station. In Zhang, the test analyzer performs any analysis regarding echo delays or the like. Zhang, however, does not describe any communication of such information. Moreover, the Examiner's identification of incorporation of features of the test analyzer, in either a transmitter or receiver also does not identify any communication a delay/amplitude echo map that, would be required to enable a transmitting station to pre-distort signal transmissions over a transmission channel between the transmitting station and the communication receiving station to eliminate channel echos in transmitted data signals by using an echo structure of the received delay/amplitude echo map of the transmission channel, as in Claim 1.

For each of the above reasons, therefore, Claim 1, and all claims which depend from Claim 1, are patentable over Zhang in view of Ulm as well as the references of record. Therefore, please reconsider and withdraw the rejections of record with regard to Claim 1. Each of Applicants' other independent claims include features similar to those highlighted above with regard to Claim 1, therefore Claims 8 and 15 are also patentable over Zhang in view of Ulm as well as the references of record. Therefore, please reconsider and withdraw the rejections of record with regards to Claims 8 and 15 as well as any independent claims.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang, as applied to Claim 8, in view of Ulm. In addition, Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang, as applied to Claim 15, in view of Ulm. Also, Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang, as applied to Claim 20, in view of Ulm. We respectfully traverse these rejections.

### DEPENDENT CLAIMS

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicant's silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

### CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely 1, 3-8, 10-17, 19-21, and 23-24, patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees. If a telephone interview would expedite the prosecution of this Application, the Examiner is invited to contact the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

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By: \_\_\_\_\_

  
Joseph Lutz, Reg. No. 43,765

1279 Oakmead Parkway  
Sunnyvale, CA 94085-4040  
Telephone (310) 207-3800  
Facsimile (408) 720-8383

#### **CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being submitted electronically via EFS Web to the United States Patent and Trademark Office on May 15, 2009.

  
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Si Vuong